

tv



PHILIPS

Introduction

Thank you for purchasing this television set.
 This handbook has been designed to help you install and operate your TV set.
 We would strongly recommend that you read it thoroughly.
 We hope our technology meets entirely with your satisfaction.

Table of Contents

Installation

Installing your television set	2
The keys on the TV set	2
Remote control keys	3
Quick installation	4
Program sort	4
Program name	4
Manual store	5
Other settings in the Install menu	5

Operation

Using the radio (only available on certain versions)	5
Picture settings	6
Sound adjustments	6
Feature settings	6
16:9 Format	7
Using PIP	7
Teletext	8

Peripherals

Video recorder	9
Other equipment	9
To select connected equipment	9
Side connections	9
Amplifier	9

Practical information

Tips	10
Glossary	11
Information for users in the UK	12
Table of frequencies	13

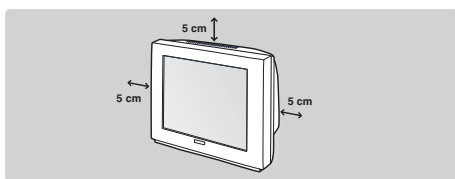


Recycling

The materials used in your set are either reusable or can be recycled.
 To minimise environmental waste, specialist companies collect used appliances and dismantle them after retrieving any materials that can be used again (ask your dealer for further details).

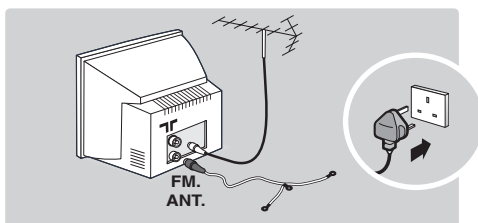
Installing your television set


1 Positioning the television set



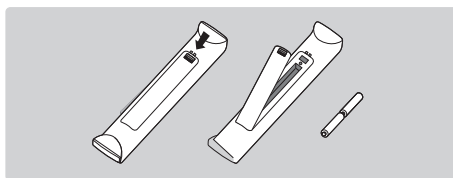
Place your TV on a solid, stable surface, leaving a space of at least 5 cm around the appliance. To avoid accidents, do not put anything on the set such as a cloth or cover, a container full of liquid (vase) or a heat source (lamp). The set must not be exposed to water.

2 Connections



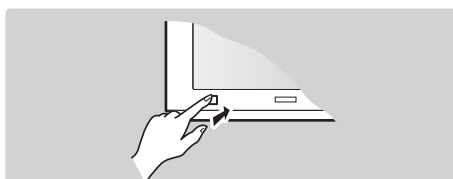
- Insert the aerial plug into the  socket at the rear of the set.
- For the versions equipped with a radio: insert the radio aerial socket into the FM ANT socket.
If you are using an indoor aerial, reception may be difficult in certain conditions. You can improve reception by rotating the aerial. If the reception remains poor, you will need to use an external aerial.
- Insert the mains plug into a wall socket (220-240 V / 50 Hz).

3 Remote control




Insert the two R6-type batteries (supplied) making sure that they are the right way round. Check that the mode selector is set to TV. The batteries supplied with this appliance do not contain mercury or nickel cadmium. If you have access to a recycling facility, please do not discard your used batteries (if in doubt, consult your dealer). When the batteries are replaced, use the same type.

4 Switching on

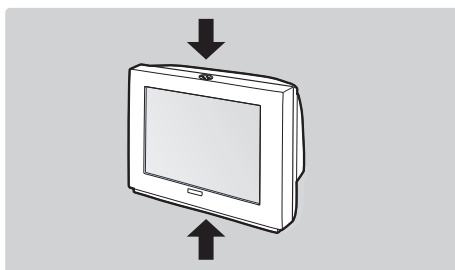








To switch on the set, press the on/off key. A red indicator comes on and the screen lights up. Go straight to the chapter Quick installation on page 4.

If the television remains in standby mode, press **P**  on the remote control. The indicator will flash when you use the remote control.

The keys on the TV set

The television set has 4 keys which are located on the front or the top of the set depending on the model.



The VOLUME - + (-  +) keys are used to adjust sound levels. The PROGRAM - + (- **P** + or - +) keys are used to select the required programmes. To access the menus, simultaneously hold down the  - and  + keys. The PROGRAM - + keys may then be used to select an adjustment and the -  + keys to make that adjustment. To exit from the menus, hold down the 2  - and  + keys.

Remote control keys

Standby

To set the TV to standby mode.
To switch the TV set on again, press - **P** + or **(0)** **(9)**.

Select peripherals (p.9)

Press several times to select the required EXT connector.

Radio /TV mode

To switch the TV set to radio or TV mode (for versions equipped with radio).

Surround Sound

To activate / deactivate the surround sound effect. In stereo, this gives the impression that the speakers are further apart. For models equipped with Virtual Dolby Surround*, you can experience Dolby Surround Pro Logic sound effects.

Cursor

These 4 keys are used to move around the menus (^ V < >).

Volume

To adjust the sound level,

Mute

To mute or restore the sound.

Screen information

To display / remove the programme number, the name (if it exists) and the sound mode. Hold down for 5 seconds to permanently display the programme number on the screen.

List of radio stations (p.5)

Dual screen (according to the version)

To activate/disable the display on 2 screens. The second screen displays teletext.

Mode selector

The remote control lets you control the main functions of the VCR or DVD. Press the **Select** key to select the required mode : **VCR**, **DVD**, **SAT**, **AMP** or **CD**. The remote control indicator lights up to display the selected mode. It switches off automatically after 60 seconds if left idle. The remote control automatically returns to TV mode. The following keys are operational, depending on the equipment :

Teletext keys (p. 8)
or PIP or VCR / DVD .

Teletext (p. 8).

Audio and video equipment key

Menu

To call up or exit the menus.

Programme selection

To access the next or previous TV channel from the list of Favourite Programmes (see p. 5).

Digit keys

Direct access to the programmes. For a 2 digit programme, enter the 2nd digit before the dash disappears.

Sound mode

Used to force programmes in **Stereo** and **Nicam Stereo** to **Mono** or, for bilingual programmes, to choose between **Dual I** or **Dual II**.

The **Mono** indication is red when in forced position.

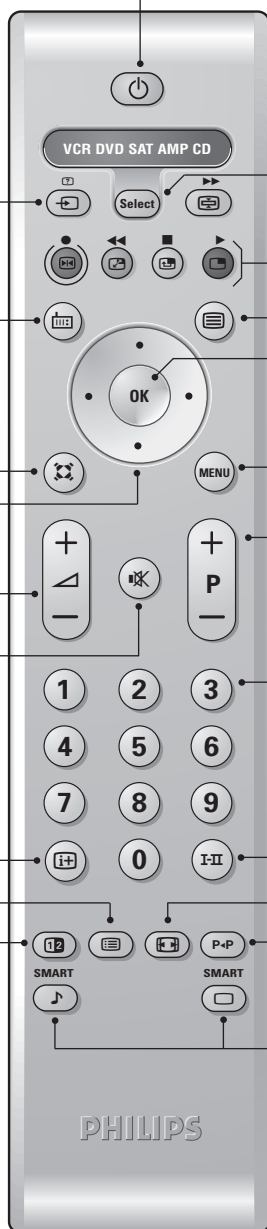
16:9 Format (p. 7).

Previous programme

To access the previously viewed programme.

Smart picture and sound

Used to access a series of predefined picture and sound settings.
The **personal** position relates to settings selected from the menus.



* Manufactured under license from Dolby Laboratories.
 "Dolby" and the double-D symbols are trademarks of Dolby Laboratories.

Quick installation

The first time you switch on the television, a menu appears on the screen and the tuning starts automatically.



If the menu is not displayed, press and hold down the \triangleleft - and \triangleleft + keys on the TV set for 5 seconds to start the tuning.

All the available TV programs and radio stations * will be stored. This operation takes a few minutes. The display shows the progress of the

search and the number of programs found.

At the end of the search, the menu disappears.

To exit or interrupt the search, press MENU .

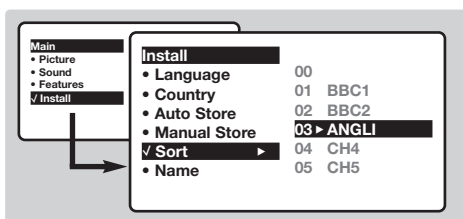
If no program is found, consult the possible solutions p. 12.

- 1 If the transmitter or cable network sends the automatic sort signal, the programs will be numbered correctly. In this case, the installation is complete.
- 2 If this is not the case, you need to use the **Sort** menu to number the programs correctly. Some transmitters or cable networks broadcast their own sort parameters (region, language, etc.). In this case, indicate your choice using the $\wedge \vee$ keys and validate with \triangleright .

* Only on versions equipped with a radio.

Program sort

- 1 Press key MENU . The **Main menu** is displayed on the screen.



- 2 With the cursor, select the **Install** menu followed by the **Sort** menu.
- 3 Select the programme you want to move using the $\wedge \vee$ keys and press \triangleright .
- 4 Then use the $\wedge \vee$ keys to select the new number and validate with \triangleleft .
- 5 Repeat steps 3 and 4 for each program you wish to renumber.
- 6 To quit the menus, press EXIT .

Program name

If required, you can give a name to the programmes and external connectors.

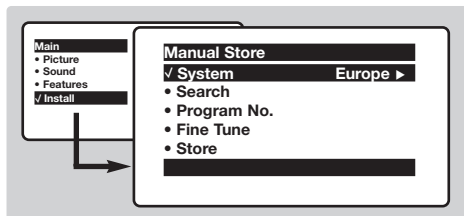
Note: on installation, the programs are named automatically when an identification signal is sent.

- 1 Press the MENU key.
- 2 With the cursor, select the **Install** menu, then **Name**
- 3 Use the $\wedge \vee$ keys to select the programme to name or rename.
- 4 Use the $\triangleleft \triangleright$ keys to move around the name display area (5 characters) and the $\wedge \vee$ keys to select the characters.
- 5 When the name has been entered, use the \triangleleft key to exit. The name is stored.
- 6 Repeat steps 3 to 5 for each programme you wish to name.
- 7 To quit the menus, press EXIT .

Manual store

This menu is used to store the programmes one at a time.

- 1 Press the **MENU** key.
- 2 With the cursor, select the **Install** menu then **Manual store**:



- 3 **System**: select **Europe** (automatic detection*) or **Western Europe** (BG standard), **Eastern Europe** (DK standard), **United Kingdom** (I standard) or **France** (LL' standard).

* Except for France (LL' standard), you must select choice **France**.

- 4 **Search**: press **>**. The search starts. Once a programme is found, the scanning stops and its name is displayed (when available). Go to the next step. If you know the frequency of the required programme, this can be entered directly using the **0** to **9** keys.

If no picture is found, consult the possible solutions (p. 10).

- 5 **Program No.**: enter the required number with the **<>** or **0** to **9** keys.
- 6 **Fine Tune**: if the reception is not satisfactory, adjust using the **<>** keys.
- 7 **Store**: press **>**. The program is stored.
- 8 Repeat steps 4 to 8 for each programme to store.
- 9 To quit the menus, press **EXIT**.

Other settings in the Install menu

- 1 Press the **MENU** key and select the **Install** menu:
- 2 **Language**: to change the display language for the menus.
- 3 **Country**: to select your country (**GB** for Great Britain).
This setting is used for the search, automatic programme sort and teletext display. If your country does not appear in the list, select "..."
- 4 **Auto Store**: to start automatic search for all programmes available in your region. If the transmitter or cable network sends the

automatic sort signal, the programmes will be numbered correctly. If this is not the case, you need to use the Sort menu to renumber the programmes (see p. 4).

*Some transmitters or cable networks broadcast their own sort parameters (region, language, etc.). In this case, indicate your choice using the **^** **v** keys and validate with **>**. To quit or interrupt the search, press **MENU**. If no picture is found, consult the possible solutions (p. 10).*

- 5 To quit the menus, press **EXIT**.

Using the radio *(only available on certain versions)*

Choice of TV or radio mode

Press the **TV/RADIO** key on the remote control to switch the TV set to either TV or radio mode. In radio mode, the number, station name (if available), frequency and sound mode are displayed on the screen. *To enter the station names, use the **Name** menu (p. 4)*

Program selection

Use the **0** **9** or **-** **P** **+** keys to select the FM stations (from 1 to 40).

List of radio stations

Press the **LIST** key to display the list of radio stations radio. Use the **^** **v** keys to change station and the **EXIT** key to exit.

Using the radio menus

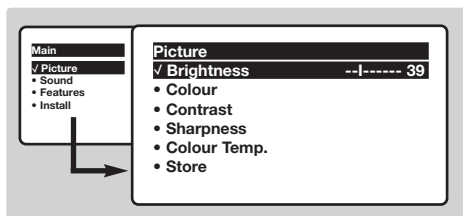
Use the **MENU** key to access the specific radio setting.

Search for radio stations

If you used the quick installation, all available FM stations have already been stored. To start a new search, use the **Install :Auto Store** menu (for a complete search) or **Manual Store** (for a station by station search). The **Sort** and **Name** menus let you sort or name the radio stations. Operation of these menus is the same as for the TV menus.

Picture settings

- 1 Press **MENU** then **>**. The **Picture** menu is displayed:



- 2 Use the **^** **v** keys to select a setting and the **<** **>** keys to adjust.

*Note: during the picture adjustment, only the selected line remains displayed. Press **^** **v** to display the menu again.*

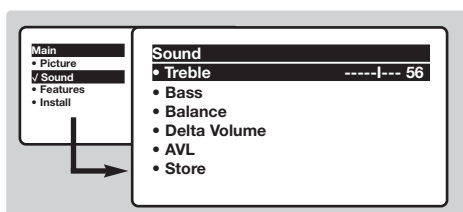
- 3 Once the adjustments have been made, select **Store** and press **>** to store them. Press **EXIT** to exit.

Description of the adjustments:

- **Brightness:** this changes picture brilliance.
- **Colour:** this changes the intensity of the colour.
- **Contrast:** this changes the difference between the light and dark tones.
- **Sharpness:** this changes the picture definition.
- **Colour Temp.:** this changes the colour rendering: **Cold** (bluer), **Normal** (balanced) or **Warm** (redder).
- **Store:** to store the picture adjustments and settings (as well as the settings for **Contrast +** and **NR** in the **Features** menu).

Sound adjustments

- 1 Press **MENU**, select **Sound** (**v**) and press **>**. The **Sound** menu is displayed:



- 2 Use the **^** **v** keys to select a setting and the **<** **>** keys to adjust.
- 3 Once the adjustments have been made, select **Store** and press **>** to store these changes.
- 4 To quit the menus, press **EXIT**.

Description of the settings:

- **Treble:** this alters the high frequency sounds.
- **Bass:** this alters the low frequency sounds.
- **Balance:** this balances the sound on the left and right speakers.
- **Delta Volume*:** this is used to compensate any volume discrepancies between the different programs or EXT sockets. This setting is available for programs 0 to 40 and the EXT sockets.
- **AVL*** (Automatic Volume Leveller): this is used to limit increases in sound, especially on program change or advertising slots.
- **Store:** this is used to store the sound settings.

* Only available on certain versions.

Feature settings


- 1 Press **MENU**, select **Features** (**v**) and press **>**. You can adjust:
- 2 **Sleep :** to select an automatic standby period.
- 3 **Rotation** (only available on very large screen sets): large screen sets are sensitive to terrestrial magnetic field variations. This setting is used to compensate for this by adjusting the picture rotation.

- 4 **Contrast +:** automatic adjustment of the picture contrast which permanently sets the darkest part of the picture to black.
- 5 **NR:** attenuates picture noise (snow) in difficult reception conditions.
*Caution: to store the **Contrast +** and **NR** settings, use the **Store** choice in the **Picture** menu.*
- 6 To quit the menus, press **EXIT**.

16:9 Formats

The pictures you receive may be transmitted in 16:9 format (wide screen) or 4:3 format (conventional screen). 4:3 pictures sometimes have a black band at the top and bottom of the screen (letterbox format). This function allows you to optimise the picture display on screen.

If your television is equipped with a 4:3 screen.

Press the  key (or $\wedge \vee$ cursor) to select the different modes:



4:3 The picture is reproduced in 4:3 format.




Expand 4:3 The picture is enlarged vertically. This mode is used to cancel the black bands when watching a programme in letterbox format.

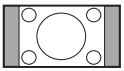


Compress 16:9 The picture is compressed vertically into 16:9 format.

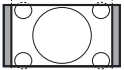
If your television is equipped with a 16:9 screen.

Press the  key (or $< >$ cursor) to select the different modes:

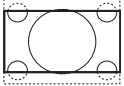
This TV set is also equipped with automatic switching which will select the correct-screen format, provided the specific signals are transmitted with the programmes.



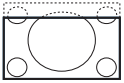
4:3 The picture is reproduced in 4:3 format and a black band is displayed on either side of the picture. The picture may be progressively enlarged using the $\wedge \vee$ cursor.



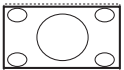
Zoom 14:9 The picture is enlarged to 14:9 format, a thin black band remains on both sides of the picture. The $\wedge \vee$ cursor allow you to compress and move the image vertically to view the top or bottom of the picture (subtitles).



Zoom 16:9 The picture is enlarged to 16:9 format. This mode is recommended when displaying pictures which have black bands at the top and bottom (letterbox format). Use the $\wedge \vee$ cursor if you wish to compress and move the image vertically to view the top or bottom of the picture.



Subtitle Zoom This mode is used to display 4:3 pictures using the full surface of the screen leaving the sub-titles visible. Use the $\wedge \vee$ cursor to increase or decrease the compression at the bottom of the screen.



Super Wide This mode is used to display 4:3 pictures using the full surface of the screen by enlarging the sides of the picture. The $\wedge \vee$ cursor allow you to scroll the image up or down the screen.









Widescreen This mode restores the correct proportions of pictures transmitted in 16:9 using full screen display.

Using PIP

(only available on certain versions)

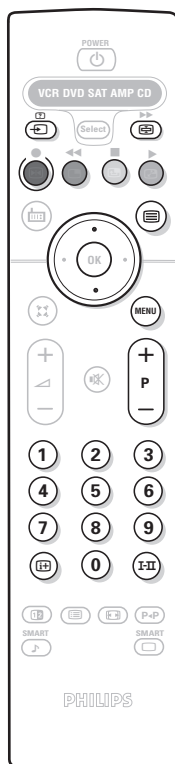
This feature enables you to display a small superimposed window.

- 1 Press the  key to display the PIP screen. A small superimposed window appears in the main screen.
- 2 Use the **- P +** keys to change the programmes of the PIP screen or the  key if you want to display a picture from an appliance connected to the TV (e.g. video recorder, DVD).

- 3 Press the  key again to change the size of the window then make it disappear.
- 4 Use the  key if you want to hide the window.
- 5 Use the  key if you want to swap the 2 pictures.
- 6 Use the  key if you want to freeze the PIP picture.

Teletext

Teletext is an information system broadcast by certain channels which can be consulted like a newspaper. It also offers access to subtitles for viewers with hearing problems or who are not familiar with the transmission language (cable networks, satellite channels, etc.).



Press :

You will obtain :



Teletext call

This is used to call teletext, change to transparent mode and then exit. The summary appears with a list of items that can be accessed. Each item has a corresponding 3 digit page number.

If the channel selected does not broadcast teletext, the indication 100 will be displayed and the screen will remain blank (in this case, exit teletext and select another channel).



Selecting a page

Enter the number of the page required using the 0 to 9 or - P + keys. Example: page 120, enter 1 2 0. The number is displayed top left, the counter turns and then the page is displayed. Repeat this operation to view another page.

If the counter continues to search, this means that the page is not transmitted. Select another number.



Direct access to the items

Coloured areas are displayed at the bottom of the screen. The 4 coloured keys are used to access the items or corresponding pages.

The coloured areas flash when the item or the page is not yet available.



Contents

This returns you to the contents page (usually page 100).




Enlarge a page

This allows you to display the top or bottom part of the page and then return to normal size.





Stop sub-page acquisition

Certain pages contain sub-pages which are automatically displayed successively. This key is used to stop or resume sub-page acquisition. The indication  appears top left.



Double page teletext

(only available on certain versions)

To activate or deactivate the double page teletext display mode. The active page is displayed on the left and the following page is displayed on the right. Press  if you want to hold a page (i.e. the contents page). The active page is then displayed on the right. To return to normal mode, press .




Hidden information



To display or hide the concealed information (games solutions).



Favourite pages

Instead of the standard coloured areas displayed at the bottom of the screen, you can store 4 favourite pages on the first 40 channels which can then be accessed using the coloured keys (red, green, yellow, blue). Once set, these favourite pages will become the default every time teletext is selected.

- 1 Press the  key to change to favourite pages mode.
- 2 Display the teletext page that you want to store.
- 3 Press the coloured key of your choice for 3 seconds. The page is now stored.
- 4 Repeat the operation with the other coloured keys.
- 5 Now when you consult teletext, your favourite pages will appear in colour at the bottom of the screen.

To temporally retrieve the standard items, press . To clear everything, and return the standard items as the default, press  for 5 seconds.



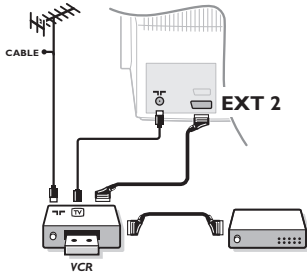
Connecting peripheral equipment

The television has 2 external sockets situated at the back of the set (EXT1 and EXT2).

The EXT1 socket has audio, CVBS/RGB inputs and audio, CVBS outputs.

The EXT2 socket has audio, CVBS/S-VHS inputs and audio, CVBS outputs.

Video recorder



Carry out the connections shown opposite, using a good quality euroconnector cable.

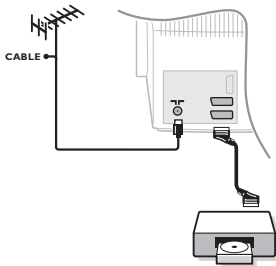
If your video recorder does not have a euroconnector socket, the only connection possible is via the aerial cable. You will therefore need to tune in your video recorder's test signal and assign it programme number 0 (refer to manual store, p. 5).

To reproduce the video recorder picture, press 0.

Video recorder with decoder

Connect the decoder to the second euroconnector socket of the video recorder. You will then be able to record scrambled transmissions.

Other equipment




Satellite receiver, decoder, CDV, games, etc.

Carry out the connections shown opposite.

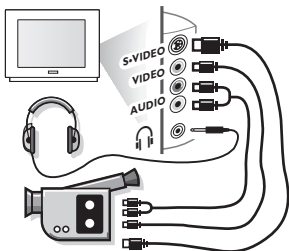
To optimise picture quality, connect the equipment which produces the RGB signals (digital decoder, games, etc.) to EXT1, and the equipment which produces the S-VHS signals (S-VHS and Hi-8 video recorders, certain DVD drives) to EXT2 and all other equipment to either EXT1 or EXT2.

To select connected equipment

Press the  key to select **EXT1, EXT2/S-VHS2** (S-VHS signals from the EXT2 socket) and **AV/S-VHS** for connections on the front panel.


Most equipment (decoder, video recorder) carries out the switching itself.

Side connections





Make the connections as shown opposite.

With the  key, select **AV/S-VHS**.

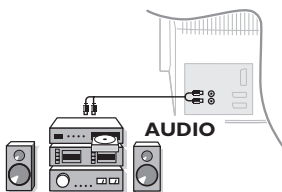
For a monophonic device, connect the audio signal to the AUDIO L input. Use the  key to reproduce the sound on the left and right speakers of the TV set.

Headphones

When headphones are connected, the sound on the TV set will be cut. The  **P**  keys are used to adjust the volume level.

The headphone impedance must be between 32 and 600 Ohms.

Amplifier (only available on certain versions)



To connect to a hi-fi system, use an audio connection cable and connect the "L" and "R" outputs on the TV set to the "AUDIO IN" "L" and "R" input on your hi-fi amplifier.

Tips


Poor reception

The proximity of mountains or high buildings may be responsible for ghost pictures, echoing or shadows. In this case, try manually adjusting your picture: see **Fine Tuning** (p.5) or modify the orientation of the outside aerial.

Does your antenna enable you to receive broadcasts in this frequency range (UHF or VHF band)?

In the event of difficult reception (snowy picture) switch the **NR** on the **Options** menu to **ON**. (p. 6).

No picture

If the television does not switch on, please press the standby key  (located on the remote control) twice.

Have you connected the aerial socket properly?

Have you chosen the right system? (p. 5).

Poorly connected euroconnector cables or aerial sockets are often the cause of picture or sound problems (sometimes the connectors can become half disconnected if the TV set is moved or turned). Check all connections.

Peripheral equipment gives a black and white picture

To play a video cassette, check that it has been recorded under the same standard (PAL, SECAM, NTSC) which can be replayed by the video recorder.

The remote control no longer works.

Check that the mode selector on the side of the remote control is set to TV.

No sound

If on certain channels you receive a picture but no sound, this means that you do not have the correct TV system. Modify the **System** setting (p. 5).

Teletext

Are certain characters not displayed correctly? Check that the **Country** setting has been positioned correctly (p.5).

Remote control

The TV set does not react to the remote control; the indicator on the set no longer flashes when you use the remote control? Replace the batteries.

Standby

To save power, your set is fitted with components that give it a very low power consumption when in standby mode (less than 3 W).

Still no results?

If your TV set breaks down, never attempt to repair it yourself: contact your dealer's after-sales service.

Cleaning the set

Only use a clean, soft and lint-free cloth to clean the screen and the casing of your set. Do not use alcohol-based or solvent-based products.

Glossary

RGB Signals:

These are 3 Red, Green and Blue video signals which directly drive the red, green and blue emitters in the cathode ray tube. Using these signals provides better picture quality.

S-VHS Signals:

These are 2 separate Y/C video signals from the S-VHS and Hi-8 recording standards. The luminance signals Y (black and white) and chrominance signals C (colour) are recorded separately on the tape. This provides better picture quality than with standard video (VHS and 8 mm) where the Y/C signals are combined to provide only one video signal.

NICAM sound:

Process by which digital sound can be transmitted.

System:

Television pictures are not broadcast in the same way in all countries. There are different standards: BG, DK, I, and L L'. The SYSTEM setting (p. 6) is used to select these different standards. This is not to be confused with PAL or SECAM colour coding. Pal is used in most countries in Europe, Secam in France, Russia and most African countries. The United States and Japan use a different system called NTSC. The inputs EXT1 and EXT2 are used to read NTSC coded recordings.

16:9:

Refers to the ration between the length and height of the screen.

Wide screen televisions have a ration of 16/9, conventional screen TV sets have a ration of 4/3.

IMPORTANT

Information for users in the UK *(not applicable outside the UK)*

Positioning the TV

For the best results, choose a position where light does not fall directly on the screen, and at some distance away from radiators or other sources of heat. Leave a space of at least 5 cm all around the TV for ventilation, making sure that curtains, cupboards etc. cannot obstruct the air flow through the ventilation apertures.

The TV is intended for use in a domestic environment only and should never be operated or stored in excessively hot or humid atmospheres.

General Points

Please take note of the section entitled 'Tips' at the end of this booklet.

Interference

The Department of Trade and Industry operates a Radio Interference Investigation Service to help TV licence holders improve reception of BBC and IBA programmes where they are being spoilt by interference.

If your dealer cannot help, ask at a main Post Office for the booklet "How to Improve Television and Radio Reception".

Mains connection

Before connecting the TV to the mains, check that the mains supply voltage corresponds to the voltage printed on the type plate on the rear panel of the TV. If the mains voltage is different, consult your dealer.


Important

This apparatus is fitted with an approved moulded 13AMP plug. Should it become necessary to replace the mains fuse, this must be replaced with a fuse of the same value as indicated on the plug.

1. Remove fuse cover and fuse.
2. The replacement fuse must comply with BS 1362 and have the ASTA approval mark. If the fuse is lost, make contact with your retailer in order to verify the correct type.
3. Refit the fuse cover.

In order to maintain conformity to the EMC directive, the mains plug on this product must not be removed.

Connecting the aerial

The aerial should be connected to the socket marked  at the back of the set. An inferior aerial is likely to result in a poor, perhaps unstable picture with ghost images and lack of contrast. Make-shift loft or set-top aerials are often inadequate. Your dealer will know from experience the most suitable type for your locality.

Should you wish to use the set in conjunction with other equipment, which connects to the aerial socket such as TV games, or a video camera it is recommended that these be connected via a combiner unit to avoid repeated connection and disconnection of the aerial plug.

Fitting the stand (if provided)

Use only the stand provided with the set, making sure that the fixings are properly tightened. A diagram showing how to assemble the stand is packed with the stand.

Never use a make-shift stand, or legs fixed with woodscrews.

Table of TV frequencies

EUROPE	
CHANNEL	FREQ (MHz)
E2.....	48.25
E3.....	55.25
E4.....	62.25
E5.....	175.25
E6.....	182.25
E7.....	189.25
E8.....	196.25
E9.....	203.25
E10.....	210.25
E11.....	217.25
E12.....	224.25
S1.....	105.25
S2.....	112.25
S3.....	119.25
S4.....	126.25
S5.....	133.25
S6.....	140.25
S7.....	147.25
S8.....	154.25
S9.....	161.25
S10.....	168.25
S11.....	231.25
S12.....	238.25
S13.....	245.25
S14.....	252.25
S15.....	259.25
S16.....	266.25
S17.....	273.25
S18.....	280.25
S19.....	287.25
S20.....	294.25
H1.....	303.25
H2.....	311.25
H3.....	319.25
H4.....	327.25
H5.....	335.25
H6.....	343.25
H7.....	351.25
H8.....	359.25
H9.....	367.25
H10.....	375.25
H11.....	383.25
H12.....	391.25
H13.....	399.25
H14.....	407.25
H15.....	415.25
H16.....	423.25
H17.....	431.25
H18.....	439.25
H19.....	447.25
21.....	471.25
22.....	479.25
23.....	487.25
24.....	495.25
25.....	503.25
26.....	511.25
27.....	519.25
28.....	527.25
29.....	535.25
30.....	543.25
31.....	551.25
32.....	559.25
33.....	567.25
34.....	575.25
35.....	583.25
36.....	591.25
37.....	599.25
38.....	607.25
39.....	615.25
40.....	623.25
41.....	631.25
42.....	639.25
43.....	647.25
44.....	655.25
45.....	663.25
46.....	671.25
47.....	679.25
48.....	687.25
49.....	695.25
50.....	703.25
51.....	711.25
52.....	719.25
53.....	727.25
54.....	735.25
55.....	743.25
56.....	751.25
57.....	759.25
58.....	767.25
59.....	775.25
60.....	783.25
61.....	791.25
62.....	799.25
63.....	807.25
64.....	815.25
65.....	823.25
66.....	831.25
67.....	839.25
68.....	839.25
69.....	855.25

EASTERN EUROPE	
CANAL	FREQ (MHz)
R1.....	49.75
R2.....	59.25
R3.....	77.25
R4.....	85.25
R5.....	93.25
R6.....	175.25
R7.....	183.25
R8.....	191.25
R9.....	199.25
R10.....	207.25
R11.....	215.25
R12.....	223.25
S1.....	105.25
S2.....	112.25
S3.....	119.25
S4.....	126.25
S5.....	133.25
S6.....	140.25
S7.....	147.25
S8.....	154.25
S9.....	161.25
S10.....	168.25
S11.....	231.25
S12.....	238.25
S13.....	245.25
S14.....	252.25
S15.....	259.25
S16.....	266.25
S17.....	273.25
S18.....	280.25
S19.....	287.25
S20.....	294.25
H1.....	303.25
H2.....	311.25
H3.....	319.25
H4.....	327.25
H5.....	335.25
H6.....	343.25
H7.....	351.25
H8.....	359.25
H9.....	367.25
H10.....	375.25
H11.....	383.25
H12.....	391.25
H13.....	399.25
H14.....	407.25
H15.....	415.25
H16.....	423.25
H17.....	431.25
H18.....	439.25
H19.....	447.25
21.....	471.25
22.....	479.25
23.....	487.25
24.....	495.25
25.....	503.25
26.....	511.25
27.....	519.25
28.....	527.25
29.....	535.25
30.....	543.25
31.....	551.25
32.....	559.25
33.....	567.25
34.....	575.25
35.....	583.25
36.....	591.25
37.....	599.25
38.....	607.25
39.....	615.25
40.....	623.25
41.....	631.25
42.....	639.25
43.....	647.25
44.....	655.25
45.....	663.25
46.....	671.25
47.....	679.25
48.....	687.25
49.....	695.25
50.....	703.25
51.....	711.25
52.....	719.25
53.....	727.25
54.....	735.25
55.....	743.25
56.....	751.25
57.....	759.25
58.....	767.25
59.....	775.25
60.....	783.25
61.....	791.25
62.....	799.25
63.....	807.25
64.....	815.25
65.....	823.25
66.....	831.25
67.....	839.25
68.....	839.25
69.....	855.25

FRANCE	
CANAL	FREQ (MHz)
2.....	55.75
3.....	60.50
4.....	63.75
5.....	176.0
6.....	184.0
7.....	192.0
8.....	200.0
9.....	208.0
10.....	216.0
B.....	116.75
C.....	128.75
D.....	140.75
E.....	159.75
F.....	164.75
G.....	176.75
H.....	188.75
I.....	200.75
J.....	212.75
K.....	224.75
L.....	236.75
M.....	248.75
N.....	260.75
O.....	272.75
P.....	284.75
Q.....	296.75
H1.....	303.25
H2.....	311.25
H3.....	319.25
H4.....	327.25
H5.....	335.25
H6.....	343.25
H7.....	351.25
H8.....	359.25
H9.....	367.25
H10.....	375.25
H11.....	383.25
H12.....	391.25
H13.....	399.25
H14.....	407.25
H15.....	415.25
H16.....	423.25
H17.....	431.25
H18.....	439.25
H19.....	447.25
21.....	471.25
22.....	479.25
23.....	487.25
24.....	495.25
25.....	503.25
26.....	511.25
27.....	519.25
28.....	527.25
29.....	535.25
30.....	543.25
31.....	551.25
32.....	559.25
33.....	567.25
34.....	575.25
35.....	583.25
36.....	591.25
37.....	599.25
38.....	607.25
39.....	615.25
40.....	623.25
41.....	631.25
42.....	639.25
43.....	647.25
44.....	655.25
45.....	663.25
46.....	671.25
47.....	679.25
48.....	687.25
49.....	695.25
50.....	703.25
51.....	711.25
52.....	719.25
53.....	727.25
54.....	735.25
55.....	743.25
56.....	751.25
57.....	759.25
58.....	767.25
59.....	775.25
60.....	783.25
61.....	791.25
62.....	799.25
63.....	807.25
64.....	815.25
65.....	823.25
66.....	831.25
67.....	839.25
68.....	839.25
69.....	855.25

ITALY	
CANALE	FREQ (MHz)
A.....	53.75
B.....	62.25
C.....	82.25
D.....	175.25
E.....	183.75
F.....	192.25
G.....	201.25
H.....	210.25
H1.....	217.25
S1.....	105.25
S2.....	112.25
S3.....	119.25
S4.....	126.25
S5.....	133.25
S6.....	140.25
S7.....	147.25
S8.....	154.25
S9.....	161.25
S10.....	168.25
S11.....	231.25
S12.....	238.25
S13.....	245.25
S14.....	252.25
S15.....	259.25
S16.....	266.25
S17.....	273.25
S18.....	280.25
S19.....	287.25
S20.....	294.25
H1.....	303.25
H2.....	311.25
H3.....	319.25
H4.....	327.25
H5.....	335.25
H6.....	343.25
H7.....	351.25
H8.....	359.25
H9.....	367.25
H10.....	375.25
H11.....	383.25
H12.....	391.25
H13.....	399.25
H14.....	407.25
H15.....	415.25
H16.....	423.25
H17.....	431.25
H18.....	439.25
H19.....	447.25
21.....	471.25
22.....	479.25
23.....	487.25
24.....	495.25
25.....	503.25
26.....	511.25
27.....	519.25
28.....	527.25
29.....	535.25
30.....	543.25
31.....	551.25
32.....	559.25
33.....	567.25
34.....	575.25
35.....	583.25
36.....	591.25
37.....	599.25
38.....	607.25
39.....	615.25
40.....	623.25
41.....	631.25
42.....	639.25
43.....	647.25
44.....	655.25
45.....	663.25
46.....	671.25
47.....	679.25
48.....	687.25
49.....	695.25
50.....	703.25
51.....	711.25
52.....	719.25
53.....	727.25
54.....	735.25
55.....	743.25
56.....	751.25
57.....	759.25
58.....	767.25
59.....	775.25
60.....	783.25
61.....	791.25
62.....	799.25
63.....	807.25
64.....	815.25
65.....	823.25
66.....	831.25
67.....	839.25
68.....	839.25
69.....	855.25



MODEL : _____

PROD. NO : _____

Please note the reference numbers for your TV set located on the packaging or on the back of the set.

